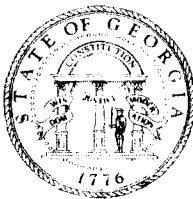


COMMISSIONERS:

DAVE BAKER, CHAIRMAN  
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EXECUTIVE SECRETARY

## Georgia Public Service Commission

244 WASHINGTON STREET, S.W.  
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DATE: May 29, 1996

TO: Office of Secretary  
Federal Communications Commission  
Washington, D.C. 20554

DOCKET FILE COPY ORIGINAL

FROM: Georgia Public Service Commission

RE: **Notice of Proposed Rulemaking and Request for Comments in the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996**

The following are the Reply Comments of the Georgia Public Service Commission regarding the Implementation of the Local Competition Provisions in the Telecommunications Act of 1996.

Our Commission appreciates this opportunity to participate in this forum and to inform the Federal Communications Commission of our concerns regarding the implementation of the Local Competition Provisions in the Telecommunications Act of 1996.

The Georgia Public Service Commission will be closely following this process as it develops in the coming months.

Sincerely,

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List ABCDE

B. B. Knowles  
Director of Utilities

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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In the Matter of )  
 )  
Implementation of the Local ) CC Docket No. 96-98  
Competition Provisions )  
in the Telecommunications )  
Act of 1996 )

REPLY COMMENTS OF THE  
GEORGIA PUBLIC SERVICE COMMISSION  
ON NOTICE OF PROPOSED RULEMAKING

The Georgia Public Service Commission (GPSC) hereby submits its reply comments to the FCC's Docket Investigating the Implementation of the Local Competition Provisions of the Telecommunications Act of 1996. The GPSC supports the Reply Comments of the National Association of Regulatory Utility Commissioners (NARUC). Attached to these reply comments are:

- 1) the testimony of Dr. David Gabel from National Regulatory Research Institute (NRRI) under contract to the GPSC.
- 2) the GPSC Staff's recommendation with Commissioner Robert B. Baker's motion in GPSC Docket No. 6352-U. Consideration of the Petition by AT&T for the Commission to Establish Resale Rules, Rates, Terms and Conditions and the Initial Unbundling of Services.

In particular, the GPSC is concerned with federal preemption of pricing issues. States should have the responsibility of assessing how economic cost studies are done as well as how to recover joint and common costs.

The GPSC appreciates the opportunity to submit these Reply Comments. Respectfully submitted this the 29th day of May, 1996.

GEORGIA PUBLIC SERVICE COMMISSION

B. B. Knowles  
B. B. Knowles  
Director of Utilities

Dave Baker  
Dave Baker  
Chairman



3. The 1996 Telecommunications Act is designed to encourage efficient competition in the telecommunications and entertainment markets. Our nation's history richly illustrates the benefits from rivalry. My own analysis of the telecommunications industry convinces me that if the regulatory rules are not correctly set, efficient entry can be blocked.<sup>2</sup> Further, State regulatory agencies possess special competencies that will be most conducive to effective regulation and will best promote consumer welfare and rivalry. Therefore, I urge the Commission to leave to the States the responsibility of assessing how economic cost studies are done as well as how to recover joint and common costs.

4. Rate Levels (§123-25) In setting the rates for interconnection, the States are obligated to evaluate the justness and reasonableness of the rate by comparing the prices with the economic, rather than the embedded, cost-of-service. Rates "(A) shall be based on the cost (determined without reference to a rate-of-return or other rate-based proceeding) of providing the interconnection or network element (whichever is applicable). . ." Furthermore, the rates should be designed to allow the local exchange carriers (LECs) an opportunity to earn "a reasonable profit."<sup>3</sup> Section 252(d) Economic costs are the appropriate criteria because they reflect the cost to society of providing interconnection. Embedded costs do not measure the magnitude of the expenses that the LEC will incur prospectively, therefore, interconnection rates based on embedded costs could result in either an over or an under supply of the service which would depend on the relationship between embedded and current costs

5. Role of Embedded Costs in Setting Rates §144 As noted in the NPR, the economic cost of providing telecommunications services has been declining over time (§144). Both telephone company cost studies and studies undertaken by academics indicate that the rate of decline has been rapid for all portions of the network, including the loop.<sup>4</sup> Whereas depreciation rates might not have fully reflected this decline in the economic cost of production, the rate base may exceed the cost of constructing a

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<sup>2</sup> David Gabel, "Competition in a Network Industry: The Telephone Industry, 1894-1910," *Journal of Economic History*, September 1994, pp. 543-572.

<sup>3</sup> In order to be consistent with the Act's requirement that economic rather than embedded costs be used to determine the price of unbundled elements, the required profits should be calculated based on the prospective economic capital requirements, not the embedded rate base.

<sup>4</sup> See, for example, David Gabel, "Pricing Voice Telephony Services: Who is Subsidizing Whom?" *Telecommunications Policy* 19 (August 1995), 453-64; and Richard T. Shin and John S. Ying, "Costly Gains to Breaking Up: LECs and the Baby Bells," *Review of Economics and Statistics* (1993): 357-61.

network today using best system practices.<sup>5</sup> If interconnection is sold at a price which reflects the economic cost of production, while retail rates reflect the embedded cost of production, LECs may argue that by pricing interconnection on the basis of the economic cost of production, they will be unable to recover their embedded cost of service unless they are permitted to raise the price of retail services. The LECs have argued that if the price of interconnection only reflects the economic costs of production, the residual embedded costs will have to be recovered through increased charges to customers in less competitive markets -- which consist primarily of residential customers.<sup>6</sup>

6. The notion of the embedded cost of service has less and less meaning in today's evolving telecommunications markets. First, the 1996 Telecommunications Act makes it clear that economic, not accounting, costs are the appropriate criteria for judging the reasonableness of rates. Second, the increased reliance on price caps at both the State and Federal levels has reduced the weight given to the accounting cost of production. Having successfully convinced many Commissions and legislatures that rate base regulation is inefficient, it is disingenuous of the LECs to argue now that rates should be set to reflect the embedded cost of production. Moreover, because of the LECs' increased interest in providing video services via facilities used in common with voice products, it has become increasingly difficult to determine which portion of the rate base is associated with monopoly telecommunications services. Therefore, before a Commission seriously considers the claim that a revenue shortfall will occur as a result of pricing interconnection at cost, the regulatory body must first ensure that the rate base has not been inflated by inefficient operations or by expenses that are not attributable to traditional telecommunications services. Furthermore, and most importantly, the Act reflects a series of compromises between interested parties. While the LECs are required to price interconnection on the basis of the economic cost of production, they are afforded the opportunity to enter new markets (for example, manufacturing, interLATA toll, video services). The clear intent of Congress was to foster efficient rivalry in the telecommunications markets. In order to promote entry into different markets, Congress required that the local exchange companies open up their

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<sup>5</sup> Ameritech suggests that if there is a depreciation shortfall, it is due to regulatory errors: "Residual costs include, among other things...the costs associated with the legacy of regulatory decisions, such as prescription of uneconomic depreciation rates (Comments of Ameritech, p. 68). Such a view is hard to understand. In order for regulators to be fully at fault for any alleged depreciation shortfall, the LECs would have to have been omniscient and fully anticipated all changes in technology and input prices. Second, the Commission would have had to ignore the evidence. And, finally, the LECs would have had to have been denied the rights for adequate capital recovery, not only by the Commissions, but also by the Courts. Even if all of this was true, Ameritech still fails to explain why uneconomic costs should be recovered in a new world where embedded costs are not supposed to be used for setting the price of interconnection.

<sup>6</sup> Comments of Ameritech, In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket 96-98. pp. 72 and 88.

markets in exchange for the opportunity to provide new products. Finally, if the price of interconnection is raised in order that the LECs' embedded costs are recovered, inefficient facility-based entry will be encouraged. So that correct budgeting decisions can be made, entrants should pay a price that reflects the economic cost of production.

7. Bell Atlantic has argued that if the price of interconnection service is sold at the economic cost of production, retail prices will need to be "rebalanced."<sup>7</sup> Some LECs contend that residential rates should be increased in order to keep the companies financially whole. This position should be rejected. The LECs have been provided with an opportunity to remain financially sound through Congress' decision to permit them to enter new markets. It would be contrary to the intent of Congress to provide financial assistance in the form of increased retail rates for existing telecommunications services, in order to compensate the LECs for having to sell interconnection services at rates that are below the embedded cost of production. The Federal Communications Commission should encourage the States to reject petitions to raise retail rates in order to compensate the large LECs for "losses" in the interconnection market. If retail rates are increased, and if the Commissions are to keep the regulatory process symmetrical, they will have to reduce the retail prices when the LECs make a profit in their new markets. This, of course, would be a regulatory nightmare. Rather than becoming entangled in a debate over the magnitude of the losses and wins in these different markets, the rules should reject any proposition to rebalance the rates in order to provide compensation for prices at cost.

8. The small local exchange companies are potentially at greater risk than the large LECs. Unlike the large LECs, it is unlikely that they will enter the interLATA or manufacturing markets. In addition, the small LECs already had some freedom to deliver video services to consumers; therefore, they gain less from the Act than the large LECs. Consequently, the Commission should consider that the net financial impact of pricing interconnection at cost may be more damaging for the small LECs than for the large ones. Nevertheless, in order to ensure that all consumers benefit from the potential rivalry, the small LECs' pricing of interconnection should also be based on the economic cost of production. Revenue shortfalls incurred by the small LECs should be addressed through explicit support mechanisms, not through distorted interconnection prices.<sup>8</sup>

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<sup>7</sup> Declaration of Robert W. Crandall (included with comments of Bell Atlantic), In the Matter of Implementation of Local Competition in the Telecommunications Act of 1996, Docket No. 96-98, May 10, 1996, p. 5, paragraph 9 and p. 11, paragraph 19. See also Comments of Ameritech, pp. 72 and 88.

<sup>8</sup> Caution should be exercised in establishing such a mechanism. The LECs have a long history of claiming that increased competition in their markets will cause financial havoc. These warnings started in the *Above 890* docket and have continued unimpeded. To date, rivalry has been a win-win situation for the

9. Economic Definitions (§126) §126 requests that commentators "define with specificity the costing methodology that they support." The following paragraph defines the different economic concepts identified in the NPR. Following the establishment of the definitions, I identify which methodology should be used in order to measure the economic cost of providing interconnection.

10. As has been pointed out in the NPR, a number of States have made significant progress in clarifying these concepts and have adopted LRIC as an appropriate methodology.<sup>9</sup> The definitions of the economic concepts identified in the NPR are rarely disputed in State regulatory proceedings. The following explanations are based largely on definitions that were established by the Colorado Public Utility Commission:<sup>10</sup>

**LRIC**—the change in total cost resulting from an increase or decrease in output. This definition is consistent with the LRIC definition offered in the NPR at §126.

**TSLRIC**—TSLRIC is equal to the firm's total cost of producing all of its services, assuming that the service (or group of services) in question is offered minus the firm's total cost of producing all of its services excluding the service (or group of services in question).

TSLRIC, like LRIC, is a forward-looking concept which should, therefore, consider all inputs into the production process as variable. Whereas the location of network nodes is currently fixed, sometimes the assumption of all variable inputs is relaxed. An estimate of TSLRIC can be generated by assuming that the future geographic locations of routes and possible switching locations are the same as those available to the firm today and that the types of technological change in the future can be anticipated. In making this estimate, the assumptions behind it should be made explicit; in addition, the estimating procedure should reflect the time period in which the resulting prices are anticipated to be in effect. TSLRIC includes both fixed and variable costs specific to

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industry, because it has stimulated demand and encouraged more efficient operations. Before embarking on any protection plan, the State Commissions and the FCC should receive evidence that is more credible than the earlier pleadings of the large and small LECs.

<sup>9</sup> The NPR points out that "some states have adopted LRIC-based pricing methodologies to set rates for interconnection services and unbundled network elements. . ." §127. It is my impression that most States have opted to use TSLRIC-based, rather than LRIC-based, pricing methodologies. See, for example, Connecticut Department of Public Utility Control, Investigation into the Southern New England Telephone Company's Cost of Providing Service, p. 27, Docket 94-10-01, June 15, 1995; Colorado Public Utilities Commission, In the Matter of Proposed Rules Regarding the Costing and Pricing of Telephone Services, Rule 4, Docket 92R-596T, June 1, 1993.

<sup>10</sup> Ibid., Rule 2.

the service (or group of services) in question. LRIC studies, on the other hand, may exclude service-specific, fixed costs. The TSLRIC for a group of services is at least equal to the sum of the TSLRIC of the individual services within the group. If the TSLRIC for the group is greater than this sum, the difference is equal to the shared costs attributable to the group of services and/or to some subset of that group. In other words, these shared costs are part of the TSLRIC of the group, but are not part of the TSLRIC of any individual service within the group.

**Forward-Looking Costs** are prospective costs, as opposed to historical costs, which are expenditures that have already been incurred for resources.

**Joint Costs** are incurred when an input is acquired, "[t]hat is, once acquired for use in producing one good, they are costlessly available for use in the production of others."<sup>11</sup>

**Common Costs:** "When the same equipment may be used to make products A and B, and when producing A uses capacity that would otherwise be used to supply B, then we may speak of their cost as common, instead of joint: and in this event, the marginal cost of A *may* include an identifiable part of these common costs."<sup>12</sup> Common costs, as opposed to joint costs, are incurred because of exclusion. When an operator is occupied placing a person-to-person call, (s)he can not simultaneously handle a collect call. On the other hand, because the loop is essentially non-traffic sensitive, when it is used for a toll call, there is no exclusion and therefore the loop is a joint cost.<sup>13</sup>

**Shared Cost:** A cost incurred for facilities and resources used in the production of two or more services and not directly assignable to any one product.

**Stand-Alone Costs:** The total cost incurred by a firm to produce a given volume of a service or group of services as if it were the sole service or group of services produced by the firm.

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<sup>11</sup> John C. Panzar, "Technological Determinants of Firm and Industry Structure" in *Handbook of Industrial Organization*, vol. 1, eds., Richard Schmalensee and Robert Willig (city, state: Elsevier Science Publishing, 1989), 17.

A more narrow definition of joint costs appears in Alfred Kahn, *Economics of Regulation*, vol. 1 (city, state: publisher, year). Kahn claims that a joint input involves usage in fixed proportions. Kahn's definition, which was proffered in 1970, has been supplemented by the broader proposition offered by Panzar. For example, energy economists have characterized the use of a power plant by peak and off-peak customers as an example of consumption of a joint good (the power plant).

<sup>12</sup> Kahn, *Economics of Regulation*, 78.

<sup>13</sup> Ameritech incorrectly asserts that common costs "would be avoided only if the entire firm shut down" (Comments of Ameritech, p. 67). This definition is incorrect. Not only is it inconsistent with the textbook definition of common costs, but as a simple matter of evidence, there is no empirical support for Ameritech's contention that corporate, legal, and financial costs are independent of the level of output.



**Embedded Cost:** The cost incurred at the time an input or resource is purchased, which is not necessarily equal to the economic (current or future) cost of replacing the input or resource. Historical costs are directly obtainable from the accounting records of the provider.

**Fully Distributed Costs:** The costs derived from the process of assigning the total embedded costs of the firm to individual products or services using cost accounting, engineering, and economic standards.

**Overheads:** Common, fixed, or joint costs that are incurred to provide managerial functions (for example, treasury and executive expenses).

**Contribution:** The difference between the revenue derived from a service and its direct cost. Contribution is required of products when economies of scope and/or scale are present.

**Residual Costs:** This is a term that appears infrequently in either the economic or cost accounting literature. It could be interpreted to mean the difference between a firm's total and its incremental costs.

11. Costing Methodology Recommendations (§128) TSLRIC, rather than LRIC, is currently the preferred means to measure the cost of production. The shared facilities utilized in the telecommunications industry are typically engineered in a fashion whereby large, lumpy investments are made which have substantial capacity. These lumpy investments may not be captured in an LRIC study, because the amount of stimulation considered, typically ten or twenty percent, may not be sufficient to alter the quantity of the facilities. But if a large volume of demand is considered, as is required by a TSLRIC study, then more facilities will be identified in the study. For example, if the demand for switched toll service is stimulated by ten percent, there would likely be no change in the quantity of fiber cable, and therefore fiber cable may not be part of the LRIC of providing toll service. But if the entire service is eliminated, the need for fiber on interoffice routes would be reduced; therefore the fiber cable can be an avoidable cost.

12. Regulatory Commissions have opted to rely on long-run rather than short-run cost studies primarily because in the short term a utility has few variable costs. The utilities typically install capacity in order to ensure that there are no serious congestion problems. Because of this excess capacity, the short-run marginal cost of many products is essentially zero. Such a cost measurement provides little or no guidance for rate setting. In order to have a meaningful metric, Commissions have encouraged

utilities to submit long-run cost studies.<sup>14</sup> Because of the increased capacity associated with today's telecommunications technology, LRIC estimates will exclude many lumpy investments. Today, in order to provide useful cost estimates that reflect the total cost of providing a service TSLRIC studies are ordinarily the preferred basis on which to set rates.

13. TSLRIC studies have other advantages relative to LRIC. The FCC and State Commissions have spent considerable resources in order to ensure that monopoly telecommunications services are not used to subsidize the LECs' new video products. An essential part of the evaluation process is determining which costs are driven by the provision of video services. An LRIC study would likely exclude network upgrade costs, because the methodology assumes that a video network will be built and asks the question: what would be the impact of a small change in demand. A TSLRIC study, on the other hand, captures the cost impact of the network upgrade. Clearly a TSLRIC study should be used to evaluate the economics of new services in order to ensure that the product is profitable. While TSLRIC studies should be used to judge the profitability of new service offerings, a consistent analytical framework should be used to judge the rates of existing services.

14. ¶128 requests comments on the costing methodologies adopted by different States. I have been involved in proceedings in Connecticut, Maine, and Pennsylvania<sup>15</sup> in which cost studies were discussed extensively. I am also familiar with the costing work done at the FCC as a part of different video dialtone filings. Furthermore, I have reviewed the cost work done by Hatfield Associates (both the Benchmark cost model, and earlier versions of this model) and have reviewed cost studies undertaken in other jurisdictions (Massachusetts and New York, for example). In these proceedings, there has been little dispute among the economists regarding the appropriate measurement of cost—TSLRIC. TSLRIC is widely advocated because it is the appropriate test to ensure that a service is not being subsidized. LECs do not want to subsidize the price of interconnection, and their rivals do not want competitive services to be subsidized. Consequently, there is large scale agreement that TSLRIC provides an economically sound basis for judging the reasonableness of rates.

15. Unfortunately, participants in regulatory proceedings have spent a small share of the time on the mechanics of the cost studies. The costing methodology, TSLRIC, is the consensus choice; the method used to apply the concept has remained largely

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<sup>14</sup> Kahn, *Economics of Regulation*, Chapter 3.

<sup>15</sup> In Pennsylvania and Connecticut I worked for the State's Consumer Counsel; in Maine I worked for the Advocacy Staff of the Maine Public Utility Commission.

unaddressed until recently. The FCC must recognize that identifying a methodology is only a small part of the process for ensuring that the cost estimates are reasonable. The forensic value of the cost studies is strongly influenced by the quality of the data used in the cost model, as well as the application of the theory.

16. Let me offer two anecdotes to illustrate this point. First, in the 1970s, the FCC spent considerable time establishing costing principles and principles that would aid it in judging the reasonableness of the proposed rates. After lengthy litigation, the Commission required AT&T to submit fully distributed cost studies in support of rate filings. These studies were enormous in scope and they were carried out by AT&T. As an employee of AT&T, I was aware of how these studies were done. It was well understood within the cost study group at AT&T Long Lines, where I was an employee, that the FCC could not monitor how these studies were conducted and therefore AT&T had the opportunity to use input data selectively, depending on its pricing objectives.

17. In a recent proceeding in Pennsylvania, I reviewed different TSLRIC studies that had been completed by Bell Atlantic. The use of TSLRIC was not in dispute—all parties in the case agreed that it was the appropriate methodology for testing for subsidies. I learned that Bell Atlantic used different unit costs for facilities depending on whether the service was a competitive or monopoly service. Even though the same facility is shared by competitive and non-competitive services, Bell Atlantic *assumed* that the unit cost of a facility was lower for competitive than monopoly services. The Company justified this assumption on the grounds that the utilization level for competitive services might become higher.<sup>16</sup> Bell Atlantic's approach is contrary to sound economics. At the margin the level of occupancy is identical for both monopoly and competitive services.<sup>17</sup> It is my understanding that this flawed methodology is being used by Bell Atlantic in its other jurisdictions and neither the FCC nor other State Commissions have ordered Bell Atlantic to change its study methodology.<sup>18</sup>

18. These two stories illustrate an essential point—economic principles can be espoused and adopted but the value of a study is equally determined by its mechanics.

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<sup>16</sup> Competitive Safeguards, Recommended Decision of Administrative Law Judge in Case M-00940587, p. 212, 215, February 29, 1996.

<sup>17</sup> The misapplication of concepts as illustrated by Bell Atlantic's study methodology can be remedied through the rule-making process, but the standards have to be carefully crafted. The rules should take into account that the cost driver on the network is not just busy-hour usage. The cost of production is also greatly impacted by the nature of the service; the transmission requirements of data and video services are significantly more stringent than they are for voice services.

<sup>18</sup> The issue is pending before the Pennsylvania Commission.

In order to ensure that studies are done properly, Commissions must require that the study methodology be part of the record. Any party submitting a study must be required to disclose its study algorithms, data inputs, and the method used to collect the data inputs.<sup>19</sup> Unless this type of disclosure is required, the study process may turn out to be largely a facade. States have recognized the need for disclosure and adopted disclosure agreements.<sup>20</sup>

19. Some States have exhibited a strong interest in taking a closer look at the mechanics of cost studies. During a period when the FCC's former Chairman, Alfred C. Sikes, stated his doubt that it is possible to quantify the cost of providing telecommunication services,<sup>21</sup> many States realized the essential need to develop better costing procedures in order to manage the transition to a more competitive market. Many States have established a fair understanding of the mechanics of a cost study and are, therefore, in a good position to evaluate the studies. Unlike the FCC under the direction of Chairman Sikes, during this decade the State commissions did not abandon the idea that cost studies still provide useful insights for judging the reasonableness of rates. Consequently, the States often have a comparative institutional advantage over the Federal agency. The Commission should exercise great caution in establishing costing rules that bind the State agencies, in light of their often superior familiarity with the topic.

20. Selection of a Particular Costing Model (§131) The administrative procedures of the State commissions also provide them with an important comparative advantage. Cost studies can be complex and the cost analyst must make certain assumptions

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<sup>19</sup> Whereas these studies will contain trade secrets and other proprietary information, appropriate protective agreements will need to be executed.

<sup>20</sup> See, for example, Colorado Public Utilities Commission, In the Matter of Proposed Rules Regarding the Costing and Pricing of Telephone Services, Rule 6, Docket 92R-596T, June 1, 1993 (for example, "When a provider submits a cost estimate to the Commission, it must simultaneously file a complete set of supporting work papers and source documents. . . . The work papers must clearly and logically present all data used in developing the estimate and provide a narrative explanation of all formulas or algorithms applied to these data. These work papers must allow others to replicate the methodology and calculate equivalent or alternative results using equivalent or alternative assumptions. . . . The work papers must be organized so that a person unfamiliar with the study will be able to work from the initial investment, expense, and demand data to the final cost estimate. Every number used in developing the estimate must be clearly identified in the work papers as to what it represents.")

A similar standard has been established by the Connecticut Department of Public Utility Control: "SNET must submit sufficient documentation so that every step of the analysis can be replicated and all source data used must be provided and documented to the degree that an audit trail is readily discernible." Application of the Southern New England Telephone Company for Approval to Offer Unbundled Loops, Ports and Associated Interconnection Agreements, p.77, December 20, 1995.

<sup>21</sup> *New York Times*, September 20, 1990, D2.

when completing a study. The suppositions and underlying data are controversial and merit close analysis by interested parties. The State Commissions have relied on litigated proceedings in order to flush out the underlying theories of different methodologies and data inputs. The FCC, on the other hand, has little recent experience with litigated cases. During the past decade, parties have filed pleadings but there has been comparatively little opportunity for parties to engage in an in-depth review of the incremental cost studies filed by carriers. Whereas 251(c)(3) requires that economic cost studies be used to judge the reasonableness of rates, and since the Commission has comparatively little experience in reviewing economic cost studies, it is essential that the States remain the primary agency for evaluating the merits of the cost estimates. Therefore, the Commission should not select a costing model, rather they should establish costing principles.

21. The states are tending towards a consensus that the reasonableness of rates should be judged in relationship to: (a) the TSLRIC and; (b) the contribution to fixed, joint, and common costs that are not directly assignable. This standard is hardly surprising. Since the advent of rivalry in the Post World War II era, the LECs have argued that the reasonableness of their own competitive offerings should be judged based on the relationship between a service's revenue and its prospective incremental costs.<sup>22</sup> The LECs and AT&T committed a large effort to convince regulators that incremental costs are the appropriate price floor. Having convinced regulators that incremental costs, rather than fully distributed costs, are the appropriate criteria for judging the reasonableness of rates, it is not surprising that this standard has emerged in the interconnection market.

22. Incremental costs (LRIC or TSLRIC) establish a pricing floor. Due to the presence of fixed and joint costs, as well as economies of scale and scope, all products cannot be priced at incremental cost. Therefore, there is a need to include a mark-up above the incremental cost of production in order to reflect the difference between incremental and total *economic* costs. Traditionally, economists have proposed that Ramsey pricing be used to identify the appropriate price mark-ups for different products (see ¶130). Practically no states have adopted the concept of Ramsey pricing; the data

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<sup>22</sup> In this proceeding, where the Commission is addressing the pricing of monopoly services, the LECs seem anxious to have the Commission give much greater consideration to embedded costs than I have seen in any of their filings that deal with the pricing of competitive or emerging competitive services. See, for example, Comments of Ameritech, P. 63 and 68; Declaration of Robert W. Crandall, paragraph 15

requirements of Ramsey pricing<sup>23</sup> cannot be met and the rule becomes quite complicated once the social welfare function includes income considerations.

23. Common Costs and Overheads (§1130). A fair share of the difference between reported incremental and total economic cost of production results from inappropriate assumptions and flawed study methods. LECs often assume that overhead expenses, such as legal, treasury, and executive expenses, are fixed. A fixed cost is a cost that persists as output approaches zero.<sup>24</sup> *The Statistics of Communications Common Carriers* clearly demonstrates that overhead expenses are not fixed—rather they vary proportionately with the size of the firm's operations.<sup>25</sup> Most of these overhead expenses should be classified as common expenses and included as a loader in the incremental cost studies.<sup>26</sup> This practice has been adopted by a number of State regulatory commissions.<sup>27</sup>

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<sup>23</sup> "[U]p-to-date estimates of the full set of pertinent elasticities and cross-elasticities are virtually impossible to calculate, particularly in markets where demand conditions change frequently and substantially. As a result, an attempt to provide the regulator with an extensive set of Ramsey prices is likely to be beset by inaccuracies, by obsolete demand data, and by delays that will prevent the firm from responding promptly and appropriately to evolving market conditions." William Baumol and J. Gregory Sidak, *Toward Competition in Local Telephony* (city, state: publisher, 1994), 39.

<sup>24</sup> William Baumol, John Panzar, and Robert Willig, *Contestable Markets and The Theory of Industry Structure* (city, state: publisher, 1982), 280.

<sup>25</sup> For example, the executive expenses of Pacific Bell was \$27,249,000 in 1994, considerably greater than the 929,000 of executive expenses incurred by United Telephone of Indiana. *Statistics of Communications Common Carriers: 1994/95* (Washington, D.C.: Federal Communications Commission, 1995), 84, 140.

<sup>26</sup> The loader is typically applied to capital costs. The largest capital element in the network is the local loop. Consequently the loop will be assigned the plurality of the overhead expenses. This is unfortunate because many administrative expenses are incurred as suppliers attempt to identify new, profitable markets, and protect existing high-margin markets. Hopefully most of this administrative activity will be directly assigned to the product line and therefore not assigned to the cost of the loop.

<sup>27</sup> For example, in Massachusetts, MCI witness Nina Cornell presented the results of a regression analysis that showed that there was a "statistical correlation between. . .overhead costs and the Company's output as measured by minutes of use." The Commission concluded that:

While the data are ambiguous regarding whether these overhead costs are merely correlated with changes in the Company's output or caused by it, the data indicate that overhead costs vary with output. It has been the Department's practice, in such circumstances, to include these costs in marginal cost calculations. . . .Therefore we will include them here. The way in which we include them [is] as a 'loader' to the calculation of capital costs. What this means is that we include them by multiplying capital costs times a constant percentage, the 'loader.'" (Massachusetts Department of Public Utilities, *Investigation by the Department into the Propriety of the Cost Studies Filed by New England Telephone*, 86-33-G

24. Mandated Pricing Formula (§131) If appropriate costing principles are followed, there should be little difference between the total service incremental and average economic cost of production. Not only should each service be priced at or above its TSLRIC, but so should each family of products. By requiring that a family of products recover the costs that are directly responsible to a group of products, rather than an individual service, the residual difference between incremental and average costs will be reduced. The remaining economic costs should not be allocated, rather the State Commissions should set prices so that these costs are recovered in a manner that is consistent with the federal and state laws. These laws are complex and at times appear to have conflicting objectives. Consequently it is not possible for the Federal Communications Commission to establish a formula that would be consistent with the various objectives embodied in the 1996 Communications Act and each State's own legislative mandate. This is especially true because different State laws adopt different objectives. Section 252(d)(1) of the 1996 Act clearly suggests that it was Congress' intention to give the States flexibility in order for the pricing rules to be consistent with the legislative goals in both jurisdictions.<sup>28</sup> Therefore, no binding pricing rules relative to this residual should be established by the Federal Communications Commission. The Commission might instead establish boundaries, such that prices should be above TSLRIC and no greater than the stand-alone cost of production. State Commissions should be provided the latitude to determine the appropriate mark-up within this range using such criteria as the market conditions and policies that exist in a State.

25. Proxy-Based Outer Bounds for Reasonable Rates (§134) Caution should be exercised in using proxies for judging the reasonableness of rates. I have reviewed a number of cost studies and have seen a great variation in the prices of inputs. If the Commission were to adopt a proxy model along the lines described in §§134 and 137, it would have to identify what constitutes a reasonable upward limit for the price of switching machines, cables, the cost-of-money, administrative costs, and so forth. This exercise would be considerably different than the Benchmark Cost model or the Hatfield study submitted by MCI (§137). These models identify the costs that are reasonable on average, or reflect best system practices. Since they estimate the cost of production based on best system production the numbers do not provide an estimate of a ceiling

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[March 21, 1989], 432-33).

<sup>28</sup> The State are precluded from adopting rules that are contrary to the Act. §253(d).

26. The Local Exchange Cost Optimization Model, developed by myself and Mark Kennet for The National Regulatory Research Institute,<sup>29</sup> can be used to estimate stand-alone costs. Stand-alone costs can serve as a rate ceiling but, by themselves, provide little guidance on what constitutes a fair and reasonable price. Due to economies of scope and scale, the interconnection price should be less than the stand-alone cost of production.

27. If the TSLRIC studies are done properly, the Commissions will have in hand stand-alone cost estimates that provide a rate ceiling. Recall that the TSLRIC is equal to the firm's total cost of producing all of its services assuming the service (or group of services) in question is offered minus the firm's total cost of producing all of its services excluding the service (or group of services in question). When the service in question is eliminated, the cost analyst then estimates the cost of production for all services in the grand coalition of products, less the service under consideration. The cost of serving the remaining group of services is an estimate of the stand-alone cost of production. For example, the TSLRIC of exchange service is the difference between the cost of providing all services and the cost of providing all existing services less exchange service. The second cost estimate can be characterized as a stand-alone cost.

28. Despite the near universal agreement that the TSLRIC is the appropriate metric for testing the reasonableness of rates, most cost studies do not use the methodology described in the prior paragraph. Rather than identify the incremental cost of production, the cost studies typically estimate the average cost of production. For example, neither the Benchmark Cost Model nor the Hatfield Model estimate the total service incremental cost of a residence, business, or private line loop. Rather they estimate the total cost of installing loops and divide this quantity by the number of working loops.<sup>30</sup> The quotient is an average cost, not the TSLRIC of a service. This average cost estimate should serve more as a rate ceiling, rather than a rate floor.

29. Using Current Rates as Proxies (§138) Neither do I endorse the idea of using existing interconnection rates as a proxy to judge the reasonableness of rates. The existing rates may or may not reflect the cost of production. Based on my experience in different jurisdictions, I believe the prices often are greatly influenced by the regulatory

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<sup>29</sup> David Gabel and Mark Kennet, *Estimating the Cost Structure of the Local Telephone Exchange Network* (Columbus, OH: The National Regulatory Research Institute, 1991).

<sup>30</sup> See, for example, "Benchmark Cost Model," A Joint Submission of MCI, NYNEX, Sprint, and US West, CC Docket No. 80-286, December 1, 1995. I have seen cost estimates made by some LECs that suffer from the same infirmity



obligation to generate revenues that equal the revenue requirement.<sup>31</sup> The revenue requirement is calculated in part based on the embedded rate base, a consideration that is explicitly ruled out by section 252(d) of the 1996 Act.

30. Use of Existing Interstate Access Rates as Temporary Benchmark (§1139) The existing access rates can serve as a *temporary benchmark*. The rates should only be used for a short period of time because of their limitations. Access rates often reflect the embedded, rather than the economic cost of production. This is contrary to Section 252(d) of the 1996 Act. By using this readily available information, the State Commissions can focus their effort on the more important task of identifying the economic cost of production.

31. Construction of Proxy for the Loop (§141) The NPR proposes that as a proxy for the loop, the Commission use the sum of “(1) the existing SLC, (2) an imputed flat-rate charged based on the CCLC paid by a customer with average usage. . . , and (3) some subset of intrastate local exchange rates.” The NPR does not address which SLC will be used for an unbundled loop, the business or residential rate. While a weighted average rate might be administratively simple, it would not reflect the cost of production. Further, the proposed methodology only identifies some of the services that use the loop and therefore make a contribution to covering the joint cost. Many premium services, such as call-waiting and caller number identification, can only be sold if a customer has a loop. The margin from these services also makes a contribution to the joint cost of the loop. Whereas the loop is an input to almost all switched services, the proxy method proposed by the NPR will only identify some of the services that benefit from the facility and cause the cost to be incurred.<sup>32</sup> For example, some States effectively recover a portion of the cost of the loop through a surcharge for touch-tone service, while other States have eliminated this charge. All else being equal, the price ceiling would be lower in the State with the non-zero price for touch-tone, even though the cost of providing access is no different. Because of these rate anomalies, and since the prices have been designed to recover average embedded rather than incremental economic costs, a different proxy should be used, as described in the next paragraph.

32. Within the past few years, almost all LECs have estimated the marginal or TSLRIC of a loop. Further, additional cost estimates are available through such sources as the

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<sup>31</sup> See, for example, Maine Public Utilities Commission, Provision of Competitive Telecommunications Services, Chapter 280.

<sup>32</sup> The demand for the loop (access) is a derived demand. The demand is derived from the consumer surplus from all switched services.

Benchmark and Hatfield Cost Models, the telecommunications engineering literature, the 1990 Rand Study by Mitchell, and in academic studies.<sup>33</sup> A consensus value should be developed from these studies. For example, most studies show that the incremental cost of providing a loop in an urban area is in the range of \$6 to \$14 per month.<sup>34</sup> Consensus values could be developed for other density zones.

33. Rate Floor for Interconnection (§143) The TSLRIC is the appropriate price floor for interconnection and unbundled element prices. A LEC should not be required to sell an input to a rival at a price that is less than its incremental cost. Prices below this level would mean that a LEC is subsidizing a rival. Furthermore, if an entrant can obtain a service from a rival for less than the incremental cost of production, the new supplier would have little incentive to construct its own facilities. Assuming that both the entrant and the LEC have identical cost structures, the entrant could rent facilities from the incumbent and earn higher profits than would be obtainable from direct facility competition. This outcome would be contrary to the 1996 Act's goal of promoting competition as identified in §12 of the NPR.

34. An entrant will face a barrier to entry if it has to buy an unbundled element at a price that is greater than the LEC's retail price. In order to prevent such a price squeeze, the LEC's prices should be required to pass an imputation test as suggested in footnote 197.

35. The issue of imputation often arises in the discussion of the pricing of the unbundled loop. In some jurisdictions, the price of local service does not cover the unseparated cost of the loop and this has led some, especially interexchange carriers (IXCs) and large LECs, to conclude that the loop is subsidized. Such a rate comparison ignores an undisputed fact, the loop is used for more than exchange service and, therefore, it is a shared facility. Section 254(k) of the 1996 Act reaffirms the Supreme Court's finding in *Smith v. Illinois*<sup>35</sup> that a portion of the joint cost of the loop be recovered from services other than the local service: "The Commission, with respect to interstate services, and the States, with respect to intrastate services, shall establish any necessary cost allocation rules, accounting safeguards, and guidelines to

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<sup>33</sup> See, for example, Gabel and Kennet, "Estimating the Cost Structure of the Local Telephone Exchange Network," 61-67.

<sup>34</sup> Admittedly this is a large range. Nevertheless, given the current retail prices in the industry, an entrant would likely find it profitable to provide service through an unbundled loop even if the \$14 cost estimate was used as a price ceiling.

<sup>35</sup> 282 U.S. 133 (1930).

ensure that services included in the definition of universal service bear no more than a reasonable share of the joint and common costs of facilities used to provide those services.”<sup>36</sup>

36. An entrant who obtains an unbundled loop from an LEC will be able to use the facility to provide multiple products—local and toll calling, call-waiting, and others. The appropriate imputation test for the loop is not the relationship between the price of exchange service and the cost of an unbundled loop.<sup>37</sup> Rather the test should reflect the contribution earned from all switched services that use the loop. If only the revenue from exchange service were considered, and if imputation were mandated, an LEC could be compelled to rent an unbundled loop at a price that was less than its direct cost. This outcome would be inefficient, not only because the price for the unbundled loop would be less than its direct cost, but also because an entrant who did not have the same economies of scope as the incumbent would be able to compete not on the grounds of greater efficiency, but rather because the price of the unbundled loop was subsidized. Rather than encouraging inefficient use of the LEC’s network, and discouraging efficient facility-based entry,<sup>38</sup> entrants should be required to pay a rate that covers the economic cost of the unbundled loop (adjusted appropriately to reflect the standards established in the universal service docket).<sup>39</sup> The success of the entrant should be dependent on its ability to sell more services than the incumbent over the loop, not on receiving a subsidized entry price.

37. The loop is a kiosk that is used to sell many products. Therefore, there would be little gained in undertaking the investigation proposed by US West at paragraph 188, footnote 251. Exchange service could only be considered subsidized if 100 percent of the loop cost is assigned to exchange service. Such a view would be contrary to the economic definition of TSLRIC. Since the cost of the loop would not be avoided if exchange service were eliminated, the loop is not part of the TSLRIC of exchange

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<sup>36</sup> Ameritech defines a joint costs as “those costs incurred in the provision of a group or family of services, but which are not incremental to any one service individually. Joint costs thus could be avoided only by eliminating the entire group or family of services” (Comments of Ameritech, p. 65). Ameritech claims that there are many types of joint costs and illustrates this point by pointing out that software packages provide multiple telecommunications services and therefore the cost could not be avoided if one service was eliminated (Comments of Ameritech, p.66). Similarly the loop is a cost that is not incremental to any one switched service. Rather the loop is a joint cost of the family of switched service products.

<sup>37</sup> This view is suggested by the Commission at ¶186, footnote 249.

<sup>38</sup> This view is suggested by the Commission at the end of ¶186.

<sup>39</sup> As discussed above, an additional contribution above the TSLRIC may be required to cover economic costs that are part of the LEC’s total cost of production, but not part of its TSLRIC.

service. Rather, as pointed out by the Colorado Public Utility Commission, it is a family product cost:

The access loop is not a separate service but rather is necessary for the provision of many telecommunications services. As such, costs associated with the access loop will not appear in the total service long run incremental cost of any single service requiring the access loop but will appear as part of the total service long run incremental cost of the entire group of services requiring the loop. Consequently, prices must be set so that the sum of the revenues from all services requiring the access loop covers not only the sum of the total service long run incremental costs for the individual services but also the shared cost of the loop.<sup>40</sup>

38. A similar conclusion was reached by the New Hampshire Public Utility Commission.<sup>41</sup>

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<sup>40</sup> Colorado Public Utility Commission, In the Matter of Proposed Rules Regarding the Costing and Pricing of Telephone Services," Decision No. C93-443, *slip op.* April 23, 1993, p.11.

<sup>41</sup> Other states have also concluded that the cost of dial tone should be recovered from the family of switched products, rather than just exchange service. See, for example, Florida Public Service Commission, Re: Investigation into Nontraffic-Sensitive Cost Recovery, Order No. 18598, December 24, 1987, 89 PUR4th 258, 265-66:

The notion that an IXC (interexchange carrier) should pay for nothing for the subscriber loop because its use does not impose additional costs on the LEC is ill founded and contrary to common business practice, which is to charge customers for use of fixed cost facilities in the price for goods and services. [citing Florida PSC Order No. 12265] It is appropriate that each service provide some contribution toward the fixed costs common to those services.

The Pennsylvania Public Utility Commission rejected AT&T's claim that "dial-tone costs are not 'joint costs' of various services." The Commission found:

There is no dispute that both the local customer and AT&T make use of the same local network to compete both local and interLATA calls. If it were not for the existence of the local network, AT&T would be required to construct at considerable expense an alternative means of access to the local customer.

Having found that "dial tone costs are joint costs," the Commission concluded that it was appropriate to recover a portion of the joint costs from toll services. *Pennsylvania PUC v. Breezewood Telephone*, 74 PaPUC (1991) 431, 494.

The commission is well aware of the [New England Telephone Company's] claim that basic local exchange service has been and continues to be subsidized by toll. In the past, the notion of various services contributing to the support of basic exchange has been reinforced by cost studies that have served to demonstrate that the 'contribution' paid by customers of other services represents a disproportionately greater share of the company's incurred costs. These studies have served to mislead due to the company's decision to assign [dial tone] costs to local exchange services despite the fact that both interstate and state toll services are provided over local NTS facilities. Without local exchange facilities there would be no mechanism to connect interexchange services to the majority of customers' premises. Since clearly the availability of the local network for toll use is a benefit to interexchange carriers and all toll customers, the Commission believes that assignment of [dial tone] costs solely to local exchange service is unreasonable.<sup>42</sup>

39. Efficient Component Pricing Rule (ECPR) (§147-148) The NPR tentatively concluded that the ECPR or equivalent methodologies should not be used to set prices for interconnection and unbundled network elements, because such pricing "would be inconsistent with the section 252(d)(1) requirement that "the prices be based on 'cost.'"<sup>43</sup> The proponents of ECPR argue that ECPR is based on cost, both the direct and opportunity cost of providing interconnection.<sup>43</sup> Baumol and Willig, as well as Kahn, have proposed that interconnection be priced on a residual basis. An interconnecting firm would have to pay the local exchange company the retail price for service, less the costs avoided by using the competitive access provider's facilities for a portion of the call. The interconnection fee proposal is designed to recover the opportunity cost associated with tying networks together. Baumol and Willig claim that the efficient component pricing rule encourages optimal use of society's scarce resources.<sup>44</sup>

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<sup>42</sup> New England Telephone Generic Rate Structure Investigation, New Hampshire Public Utilities Commission DR 89-010, *slip op.* March 11, 1991, pp. 39-40.

<sup>43</sup> See, for example, Comments of Ameritech, pp. 91-93.

<sup>44</sup> William J. Baumol and Robert D. Willig, "Economic Principles for Evaluation of the Issues Raised by Clear Communications Ltd. on Interconnection with Telecom Corporation of New Zealand, Ltd." Filed August 1992, in *Telecom Corporation of New Zealand Ltd. V. Clear Communications Ltd.* 1 NZLR 385 (1995); and Affidavit of Alfred Kahn, cited in Federal Communications Commission, In the Matter of Expanded Interconnection with Local Telephone Company Facilities, CC Docket No. 91-141, released October 19, 1992, paragraph 123.

40. Entrants to the industry have argued that the efficient component pricing rule "inhibits competition because it virtually forces every [entrant] to mirror" the rates of the incumbent.<sup>45</sup> To illustrate this point, assume that the retail price of a call on an LEC's network is twenty cents, while if the call is carried, in part, by another carrier, the incumbent avoids three cents in production expenses, but incurs one cent in costs when joining the two networks together. Under the ECPR, the connecting carrier must pay the LEC eighteen cents—one cent for the direct cost and seventeen cents for the incumbent's foregone profit (twenty cents retail price, less the avoided three cent production expense). This seventeen cents is part of the entrant's incremental cost

41. Under the ECPR, if an LEC raised its price to twenty-two cents, the entrant would then have to pay nineteen cents for interconnection—one cent for the direct cost and nineteen cents for the incumbent's foregone profit (twenty-two cents retail price, less the three cent production expense). This payment of nineteen cents would be part of the entrant's incremental costs and would have to be reflected in its price. This example illustrates how, under ECPR, entrants are effectively blocked from introducing innovative tariff arrangements, because their own cost structure becomes inextricably linked to the incumbent's retail tariff gradient. It is in the nature of competition for new suppliers to find innovative ways to package new and existing products. Therefore, whatever the static production efficiency properties claimed by the proponents of ECPR might be, these benefits must be weighed against the harm to rivalry which results from hindering entrants from finding ways to package products in a manner that is preferred by customers. Since the seminal work of Schumpeter, an increasing number of economists have argued that innovation, not static efficiency properties, should be the center of economic analysis. Part of this innovative process is for firms to decide what they should be producing and how their products should be sold.<sup>46</sup>

42. The optimal strategy for a company depends on its comparative advantage. Firms appraise their core capabilities and select a strategy that appears optimal, given the unknown future risks inherent in rivalry. Businesses exhibit great variation in aptitude

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<sup>45</sup> MCI adds that setting the interconnection price at the LEC's price less the costs that the LEC avoids "is unworkable in practice because of the bewildering variety of prices and discounts for toll service offered by a local exchange company." Exceptions of MCI to Hearing Examiner's Decision, Maine Public Service Commission, Investigation into New England Telephone Company's Cost of Service and Rate Design, Docket No. 92-130, p.4.

<sup>46</sup> See, for example, Richard Nelson, "Why do firms differ, and how does it matter?" *Strategic Management Journal* 12 (1991): 61-74.

and prospective; therefore, they adopt different strategies.<sup>47</sup> This essential aspect of rivalry is assumed away under ECPR; Baumol and Willig presume that the integrated incumbent firm and the entrant sell homogeneous products.<sup>48</sup> Since ECPR fails to take into account product differentiation, the opportunity for entrants to adopt innovative marketing strategies is tempered. As illustrated in the example above, the incumbent's own retail pricing strategy greatly affects the pricing strategy of the entrant. This hinders the entrant's ability to develop different approaches to providing service. In industries undergoing rapid technological change, it is especially important that entrants not be constrained by the pricing decisions made by the incumbent. Business historians have documented how firms develop certain perceptions of their market and slowly adapt to certain market signals. Officials within companies develop business practices that are sensible under certain market conditions.

43. In network industries, an entrant must interconnect with the dominant carrier in order to have access to subscribers on the incumbent's network. If interconnection pricing rules are adopted, which would compel an entrant to mirror the rates of the incumbent, the evolution of the market will be slowed. The entrant will be constrained from developing innovative tariffs and this will hinder the evolution of the industry.

44. Rate Structure (§149-153) The NPR requests comments on establishing federal rules and principles concerning rate structures. The most novel aspect of the proposed rate structure is the introduction of capacity-based rates. Capacity charges are not very common in the United States. We have little understanding of how they would affect the current wholesale and retail price structure. The topic of the capacity-based rate has been explored more fully in the United Kingdom. After considering this topic, the Director General of OfTel recently concluded that caution must be exercised before capacity-based pricing is adopted.<sup>49</sup> At this juncture, I recommend that the Commission exercise similar caution on this topic.

45. Caution should also be exercised by the Commission in establishing a requirement that tariffs for dedicated facilities be set on a flat-rate basis. The design of rate levels and rate structure is an art in which the appropriate answer is much influenced by a

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<sup>47</sup> Ibid.

<sup>48</sup> Mark Armstrong and Chris Doyle, "Access Pricing, Entry and the Baumol-Willig Rule," Discussion Paper No. 9422, Department of Economics, University of Southampton.

<sup>49</sup> Don Cruikshank, "Effective Competition: Framework for Action, A Statement on the Future of Interconnection, Competition and Related Issues" (London, England: Office of Telecommunications, July 1995), Chapter 10.

supplier's cost structure and levels, as well as its social, commercial, and economic objectives. The Commission should not require that a certain structure should be followed; rather State Commissions should be encouraged to provide suppliers with options that reflect the underlying economics of the industry. By providing carriers with a menu of choices, they will be able to select pricing structures that are compatible with their own commercial objectives. At the same time the prices must be subsidy free.

46. Pricing of Wholesale Services (§§178 to 182) The Act requires that wholesale rates be set at the retail rate, less the avoidable costs. In §181 the Commission proposes that the agency identify those costs that are avoidable. Such a list would provide *guidance* for the States. This information would be beneficial as long as it is understood that these are guidelines, rather than requirements. Since the States set the retail prices for many services, and service definitions may vary across jurisdictions, the State Commissions should retain final authority on what constitutes an avoidable cost.



Dated this 25th day of May, 1996.



David Gabel

Subscribed and sworn to before me this 25th day of May, 1996.

  
Notary Public

My Commission expires on  
Jili A. Papazian  
NOTARY PUBLIC  
My commission exp. Apr 3 2003